

ABSTRACT

An optical packet switch switches optical packets according to bit-rates at which the optical packets are provided. For example, optical packets that are received at similar bit-rates may be routed to a destination at separate time slots over a single channel wavelength, and optical packets that are received at different bit-rates may be routed to the destination over separate channel wavelengths. When optical packets are provided at different bit-rates on a plurality of input paths, optical packets provided at low bit-rates may be compacted before switching to the destination. Alternatively or additionally, the bit-rates of the optical packets may be balanced before switching to the destination. Bandwidth contention among optical packets may be resolved by polarizing optical packets originating from separate input paths in different polarization directions, and merging optical packets having different polarization directions onto a single switched channel wavelength. Compaction of optical packets may alternatively be employed for resolution of bandwidth contention. Related apparatus and methods are also described.